

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

1. (Currently Amended) A plant cultivation system, comprising:
a porous enclosure, wherein the porous enclosure is a conformable sealed porous bag; and

a water insoluble polymer contained within a the porous ~~bag or~~ enclosure, characterised by wherein the water insoluble polymer ~~being a~~ is a particulate poly(ethylene oxide) hydrogel.
2. (Previously Presented) A plant cultivation system as in Claim 1, which is placed close to the roots of plants growing in the ground.
3. (Previously Presented) A plant cultivation system as in Claim 1, which is placed close to the roots of plants growing in pots or containers.
4. (Previously Presented) A plant cultivation system as in Claim 1, wherein the poly(ethylene oxide) hydrogel is rendered insoluble in water by physical or chemical cross-linking.

5. (Previously Presented) A plant cultivation system as in Claim 1, wherein the hydrogel particles are between 100 microns to 1cm in diameter.

6. (Previously Presented) A plant cultivation system as in Claim 1, wherein the poly(ethylene oxide) hydrogel contains additives.

7. (Previously Presented) A plant cultivation system as Claim 1, wherein the poly(ethylene oxide) hydrogel is coloured.

8. (Previously Presented) A plant cultivation system as in Claim 1, wherein the poly(ethylene oxide) hydrogel swells rapidly on contact with water.

9. (Previously Presented) A plant cultivation system as in Claim 1, wherein one kilogram of dry poly(ethylene oxide) hydrogel will store 3 to 20 litres of water.

10. (Previously Presented) A plant cultivation system as in Claim 1, wherein the porous bag is rapidly permeable to water.

11. (Previously Presented) A plant cultivation system as in Claim 1, wherein the porous bag is produced in different sizes, such that it is suitable for a range of plants and containers.

12. (Previously Presented) A plant cultivation system as in Claim 1, wherein the porous bag is produced in a range of different shapes, so that it is suitable for a range of plants and containers.

13. (Previously Presented) A plant cultivation system as in Claim 1, wherein the amount of poly(ethylene oxide) hydrogel in a porous bag is altered depending on the water requirements of the plant for which it is to be used with.

14. (Currently Amended) A plant cultivation system as in Claim 1, wherein the size of the pores in the exterior material of the porous bag ~~are as large as possible without allowing~~ do not allow the significant escape of contained particulate hydrogel.

15. (Previously Presented) A plant cultivation system as in Claim 1, wherein the porous bag is sealed by heat sealing.

16. (Previously Presented) A plant cultivation system as in Claim 1, wherein the bag is sealed by stitching.

17. (Previously Presented) A plant cultivation system as in Claim 1, wherein the bag is sealed by glue.

18. (Previously Presented) A plant cultivation system as in Claim 1, wherein the porous bag is produced from a material with an air water surface contact angle below 90°.

19. (Previously Presented) A plant cultivation system as in Claim 1, wherein for plants with low water requirements, the porous bag is produced from a material with an air water surface contact angle of greater than 90°.

20. (Previously Presented) A plant cultivation system as in Claim 1, wherein the porous bag is produced from cellulose or a cellulose derivative.

21. (Previously Presented) A plant cultivation system as in Claim 1, wherein the porous bag is knitted, braided, woven or in the form of felt.

22 – 26. Canceled.